In the Claims

1. (Currently amended) A method of producing a transformed dicotyledonous plant, comprising:

[[(a)]] culturing a dicotyledonous plant tissue comprising a meristematic region ~~of a dicotyledonous plant recalcitrant for transformation~~ on a shoot multiplication (SM) ~~culture~~ medium to produce a multiple shoot culture from the tissue;

[[(b)]] introducing a nucleic acid into a cell of the multiple shoot culture, thereby producing a transformed cell comprising the nucleic acid; and

[[(c)]] regenerating a transformed plant from the transformed cell;

wherein said dicotyledonous plant tissue is squash, melon, watermelon, sunflower, or sugarbeet tissue.

Claims 2-13 (Canceled)

14. (Withdrawn) The method of Claim 1, wherein the nucleic acid comprises a gene that encodes a polypeptide having PPO activity.

15. (Withdrawn) The method of Claim 1, wherein the nucleic acid comprises a gene that encodes a polypeptide having phosphomannose isomerase (PMI) activity.

16. (Withdrawn) The method of Claim 1, wherein the nucleic acid comprises a gene that encodes a polypeptide having xylose isomerase (xylA) activity.

Claim 17 (Canceled)

18. (Currently amended) The method of Claim 1, wherein ~~step (c)~~ regenerating comprises:

selecting a multiple shoot culture comprising a transformed cell;

growing the multiple shoot culture under conditions that promote shoot elongation to produce at least one transformed shoot; and ~~then~~

growing the at least one transformed shoot ~~into a mature transformed plant~~.

Claims 19-21 (Canceled)

22. (Currently amended) A transformed plant cell produced [[by]] during the method of claim 1.

23. (Currently amended) A multiple shoot culture produced [[by]] during the method of claim 1.

24. (Original) A transformed plant produced by the method of claim 1.

25. (Withdrawn) The transformed plant according to Claim 24, wherein the plant is a squash plant that expresses a polypeptide having PMI activity.

26. (Withdrawn) The transformed plant according to Claim 24, wherein the plant is a melon plant that expresses a polypeptide having PMI activity.

27. (Withdrawn) The transformed plant according to Claim 24, wherein the plant is a watermelon plant that expresses a polypeptide having PMI activity.

28. (Withdrawn) The transformed plant according to Claim 24, wherein the plant is a sugar beet plant that expresses a polypeptide having PPO activity.

29. (Original) A seed produced by the transformed plant of Claim 24, wherein the seed comprises the nucleic acid transformed into the multiple shoot culture.

Claims 30-50 (Canceled)

51. (New) The method of claim 1, wherein said dicotyledonous plant tissue is squash, melon, watermelon, or sunflower tissue comprising either a cotyledonary petiole from a germinating seedling or a shoot tip from a germinating seedling, and said cotyledonary petiole or said shoot tip is cultured on SM medium comprising about 2 to 4 mg/L 6-benzyl-aminopurine (BA).

52. (New) The method of claim 51, wherein said SM medium further comprises MS salts, about 30 g/L sucrose, B5 vitamins, and about 4g/L Phytagel™.

53. (New) The method of claim 1, wherein said dicotyledonous plant tissue is sugarbeet tissue comprising a shoot tip from a germinating seedling cultured on SM medium comprising about 1 to 10 mg/L of at least one cytokinin growth regulator, and said shoot tip is subcultured to fresh SM medium, after removing any new elongated leaf material, about every 7 to 10 days for about 4 to 6 weeks.

54. (New) The method of claim 53, wherein said cytokinin growth regulator comprises at leat one of BA, kinetin, 2-ip, and zeatin.

55. (New) The method of claim 53, wherein said shoot tip comprises apical and axillary shoot meistematic regions, leaf primordia, and a portion of a hypocotyl.

56. (New) The method of claim 53, wherein said SM medium comprises MS salts, about 30 g/L sucrose, B5 vitamins, and about 8g/L Phytagel™.

57. (New) The method of claim 1, wherein said SM medium further comprises auxin-like growth regulators.

58. (New) The method of claim 1, wherein said nucleic acid is introduced into said cell using *Agrobacterium.*

59. (New) The method of claim 58, wherein a scalpel blade is used to introduce said *Agrobacterium* into at least one of an apical and an axillary meristem region of said multiple shoot culture.

60. (New) The method of claim 59, further comprising applying about 4 to 6 µl of MSMG (MS salts, about 2 g/L glucose, MES, and about 200 µM acetosyringone) to a wounded surface following introduction of said *Agrobacterium.*

61. (New) The method of claim 1, wherein said nucleic acid comprises a nucleic acid that is heterologous to the dicotyledonous plant.

62. (New) The method of claim 18, wherein said dicotyledonous plant tissue is sugarbeet tissue and said conditions that promote shoot elongation comprise culturing on a shoot

elongation medium comprising MS salts, B5 vitamins, about 30% sucrose, Phytagel™, and about 0.1 to 1.0 mg/l cytokinin.

63. (New) The method of claim 62, wherein said cytokinin comprises about 0.5 mg/L kinetin.

64. (New) A method of producing a transformed dicotyledonous plant, comprising:

culturing a dicotyledonous plant tissue comprising a meristematic region on a shoot multiplication (SM) medium to produce a multiple shoot culture from said tissue;

using *Agrobacterium* to introduce a nucleic acid into a cell of said multiple shoot culture, thereby producing a transformed cell comprising said nucleic acid; and

regenerating a transformed plant from said transformed cell;

wherein said dicotyledonous plant tissue is from a plant of any family selected from *Cucurbitaceae*, *Chenopodiaceae*, and *Asteraceae*.